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IN THE

Supreme Court of the United States

October Term, 1975
No. 74-1033

C. MARSHALL DANN, COMMISSIONER OF PATENTS & TRADEMARKS,

Petitioner,

vs.

THOMAS R. JOHNSTON,

Respondent.

On Writ of Certiorari to the United States Court of Customs and Patent Appeals.

Brief Amicus Curiae for Los Angeles and Philadelphia Patent Law Associations.

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The Los Angeles and Philadelphia Patent Law Associations consist of lawyers who regularly counsel their clients regarding the assertion of, and defense against, patent rights. These Associations appear here in an attempt to assist the Court in an orderly development of the patent law and, more particularly, to urge that it would be inappropriate to create a *per se* rule of computer program unpatentability and that the law should be allowed to develop on a case-by-case basis in this complex area.

In accordance with Rule 42 of this Court, these Associations have obtained the consent of both Petitioner and Respondent to the filing of this brief.

The Background Facts.

Computers have become a prominent part of contemporary life. The technology regarding computers has developed at an almost explosive rate and thousands of patents have been granted on computer-related technology. However, because of the rapidity with which computers perform their functions, a mystique of sorts has attached to them in the minds of some as having near-human qualities; a mystique that is baseless since computers in reality are as dependent on humans to operate them as are automobiles or aircraft.

The law of patents has not been immune from this mystique and it is believed that the present case bears witness to that fact. It is imperative that consideration of this case begin with a clear understanding of what is being claimed. As pointed out by the Court below,[1] claim 20 of the patent application is exemplary. For the purpose of determining whether the claim recites a machine, process, composition of matter or something else, it may be stripped of excess verbiage as follows:

> "20. A . . . *machine system* . . . comprising . . . a *data processor* including a *memory* . . .; a *processor* for combining and comparing . . .; *input* and *output* devices; . . . said *memory* including . . .; said *control system* including *means for directing* the processing . . . said processing directing means including *means for locating* . . .; and

[1] *In re Johnston*, 502 F.2d 765, 767 (CCPA 1974)

> *means for producing* an output record . . .; said output record producing means including *means for identifying* . . ." (emphasis added).

Thus, the claim recites in its preamble that it is a "machine system" and then recites ten different tangible components of that system which are variously identified as processors, memory, input and output devices, a control system and means for directing, locating, producing and identifying.[2]

Were this case concerned with virtually anything other than computers, it would seem extremely doubtful that there would be any disagreement with the view that the foregoing claim recites a "machine" in the sense of 35 U.S.C. 101 and in the sense that that word is generally used.

However, the claim includes elements which are conventionally referred to as computer "software" and there has been continuing controversy as to how software should be treated under the patent law.[3]

In a very oblique sense, an aspect of the software patentability issue reached this Court in *Gottschalk v. Benson*, 409 U.S. 63 (1972), but this Court was careful to state that it was *not* attempting to decide the broad issue and, at 409 U.S. 71, said:

> "It is said that the decision precludes a patent for *any program* servicing a computer. We do *not* so hold." (emphasis added).

[2] Claims couched in terms of "means for . . ." are expressly sanctioned by the third paragraph of 35 U.S.C. 112.

[3] See, *e.g.*, 1974 Committee Reports of the Section of Patent, Trademark and Copyright Law of the American Bar Association, Report of Committee 410 at pp. 306-314, which sets forth a comprehensive bibliography of legal publications on the subject.

The claims before this Court in *Benson* were *not* directed to a program, but rather to a *method for converting* a certain type of number, binary coded decimal numerals, into another kind of number, pure binary numerals. This method was held to be not patentable subject matter under 35 U.S.C. 101 because it was nothing more than an abstract principle even though it could be translated into a computer program. This was precisely the same as saying that the mathematical formula for converting fractions into decimals by dividing the numerator of the fraction by the denominator is not patentable *and* cannot be made patentable by recording it as part of a computer program any more than it could be made patentable by writing it on paper or engraving it in stone. This Court then went on to hold that if *that type* of program were to be made patentable, it would have to be by Congressional action and said, at 409 U.S. 72:

> "It may be that the patent laws should be extended to cover *these* programs, a policy matter to which we are not competent to speak. The President's Commission on the Patent System rejected the proposal that *these* programs be patentable. . . . If *these* programs are to be patentable, considerable problems are raised which only committees of Congress can manage. . . ." (emphasis added).

Thus, it would appear clear that this Court's discussion of Congressional action was directed only to the *particular type* of programs which it was considering in *Benson*, the only antecedent for "these programs"

being programs directed to such mathematical formulas. This is all the more so when it is kept in mind that, as recognized by Petitioner (Pet. Br. 15, 16), programs for general purpose digital computers fall into at least two broad categories, viz., "system software" which performs only certain standard essential operations, *e.g., translating*, sorting, etc. and "applications software" which make the computer perform desired operations, *i.e., control systems*. Petitioner further recognizes that the program claimed in combination with a computer in the present case is a *control* program (Pet. Br. 16). In contrast, the method considered by this Court in *Benson* was a *translating* method and the discussion of computer programs in that case was limited to *translating* programs. Thus, the issues in this case have little in common with those in *Benson*.

The precept that patents may not be obtained for mathematical formulas was not new in *Benson*; the decision cites a long line of earlier cases which so held, to which could be added *In re Bernhart*, 417 F.2d 1395, 1399 (CCPA 1969).

However, the Court of Customs and Patent Appeals has indicated that it finds the *Benson* decision by this Court to be somewhat inscrutable, *e.g.*, the concurring opinion by Judge Rich in *In re Christensen*, 478 F.2d 1392, 1396 (CCPA 1973) said:

> "The Supreme Court in *Benson* appears to have held that claims drafted in such terms are not patentable—for what reason remaining a mystery."

Against this background, Petitioner in the present case asks this Court to decide (as the first two of the three questions presented in the Petition):

> 1. Whether this Court's holding in *Gottschalk v. Benson*, 409 U.S. 63, that a new idea to be implemented by programming an existing computer is unpatentable when claimed as a new "process" also applies when the programmed computer is claimed as a new "machine system".
>
> 2. Whether programs for existing general purpose digital computers, however claimed, are patentable under present law. (Pet. 2).[4]

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[4] "Pet." refers to the Petition for Certiorari.
"Br. in Opp." refers to the Brief in Opposition to the Petition.
"Pet. Br." refers to Brief for the Petitioner.
"CBEMA Br." refers to Brief Amicus Curiae for the Computer and Business Equipment Manufacturers' Association.

SUMMARY OF ARGUMENT.

Petitioner's question number 1 is obscurely put. It assumes as fact an issue which is hotly contested by the parties, viz., that the patent application claims are directed to an "idea" rather than a "machine", and then asks whether such supposed "ideas" are patentable under this Court's holding in *Gottschalk v. Benson*, 409 U.S. 63 (1972). The question could have been far more aptly put as follows:

> "Do the patent application claims recite a 'machine' within the terms of 35 U.S.C. 101?"

However phrased, the answer to the question is that the claims do recite a statutory machine and that this Court's decision in *Benson* is applicable, if at all, only as a precedent which might bear on the question of whether an unpatentable old machine or a patentable new machine is claimed.

Petitioner implicitly recognizes this fact by focusing his discussion of statutory subject matter (Pet. Br. 20-24) on his notion of the "gist" of the invention (Pet. Br. 20) rather than on the claims themselves and by then discussing at much greater length (Pet. Br. 25-37) *another* question, not expressly stated as one of the "Questions Presented" in the Petition: that of whether claiming the combination of an existing computer and a new program is a claim to an old machine or a patentably new machine. This question would be meaningless if the claims did not recite a statutory machine.

The amicus Associations believe that it would not be appropriate to formulate a *per se* rule of unpatentability, particularly in this case, for this question or its variant, petitioner's question number 2, the broad

issue of computer program patentability, "however claimed", because:

> 1. Computer programs can take, and have taken, many forms and can be used to perform widely varying functions. It is unreasonable to ask this Court to formulate a *per se* rule of law regarding the patentability of such subject matter which will effectively deal with the wide variety of known variables and also deal with advances in technology not presently known. Furthermore, there is no overriding reason why such subject matter should be singled out for special treatment in the manner of, *e.g.*, atomic energy. Certainly, Congress has taken no action to indicate that such special treatment is warranted.
>
> 2. The factual record in the present case, which consists only of respondent's patent application and the prior art cited by the Patent Office, is manifestly inadequate for an informed evaluation of the question. Neither the patent application nor the prior art attempts to deal with the broad question of computer program patentability and this Court would venture into deep water if it attempted to decide this issue without a fully developed record, including the testimony of experts who had been subjected to cross-examination and a documentary history of the development of computer programming to date.

As to Petitioner's question number 3, which goes to the ultimate question of patentability of the particular claims here in issue, the amicus Associations express no view, but do believe it appropriate to point out that Petitioner suggests an approach to this issue which

does not conform to this Court's prescription in *Graham v. John Deere Co.*, 383 U.S. 1 (1966).

The Claims Are Directed to a Machine, Not an Idea, and Are Statutorily Proper Under 35 U.S.C. 101.

As we have pointed out above, the machine system claims which are before this Court contain several indisputable "hardware" elements, *e.g.*, the "data processor" and the "input and output devices".[5] Thus, there can be no doubt that these claims are directed to a "machine" as that term is used in 35 U.S.C. 101 and according to the ordinary usage of that term.

Petitioner attempts to transmute this machine claim into a nonstatutory "idea" claim by focusing only on the control system which may be constituted as a computer program. This is simply an incorrect analysis.

Indeed, Petitioner has found it impossible to avoid conceding that the claims before this Court recite a machine. These concessions are several and we cite a few.

First, we note that the principal discussion of this issue at pages 13-20 does not once make reference to the claims, but rather devotes extensive attention to Petitioner's characterization of the "invention". However, at the terminal portion of this discussion (Pet. Br. 20), Petitioner did make a key concession when he said:

> "The 'means' *disclosed* by respondent are those of an ordinary general purpose digital *computer*, as presently used by banks, *with a program* directing these components of the computer to . . ." (emphasis added).

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[5]See claim 20, quoted in *In re Johnston*, 502 F.2d 765, 767 (CCPA 1974).

If that statement were amended to read, "The 'means' disclosed *and claimed* . . ." it would accurately state the pertinent fact, viz., that the claims in question recite a machine, *i.e.*, a computer, in combination with a program and the points remaining for decision are whether the recitation of the program is sufficiently definite, and if so, whether it is an apparatus limitation which imparts patentability to the claim.

Second, it is clear that Petitioner has attempted to avoid dealing with what the claims *actually recite* by emphasizing the "essence", "heart", and "gist" (Pet. Br. 10, 18, 20) of the invention, as Petitioner sees it. However, such discussion is entirely beside the point. As this Court said in *Aro Manufacturing Co. v. Convertible Top Replacement Co.*, 365 U.S. 336, 345 (1961):

> Yet this Court has made it clear in the two Mercoid cases that there is *no legally recognizable* or protected 'essential' element, 'gist' or 'heart' of the invention in a combination patent." (emphasis added).

Just as it would have been improper to decide infringement in *Aro* by reference to only a part of the claim, so too would it be improper to decide patentability here only by reference to part of the claims.

Third, the discussion (Pet. Br. 25, 26) by Petitioner of the proposition that a new use of an existing machine is not patentable as a machine would be totally irrelevant if the claims presented here were not indeed directed to a machine. In fact, Petitioner, in the end, found it impossible not to say so:

> "Thus, rather than seeking a machine patent by claiming discovery of a new use for an existing machine (barred by long-standing authority). . . . *he presses his claims* in terms of a 'machine system' *consisting of the programmed computer*." (Pet. Br. 29, 30, emphasis added).

This is a flat recognition of the reality that the claims are directed to a statutory machine.

Although the claims clearly meet the requirements of 35 U.S.C. 101, that is not the end of the matter. In order to fully decide the question of claim patentability, it is necessary to consider whether claims (a) meet the requirements of 35 U.S.C. 112 for definiteness and (b) the requirements of 35 U.S.C. 102 and 103 for novelty and unobviousness. In order to do this, it is necessary to analyze what the program *is* and what it *does*.

In the present case, the amicus Associations express no view as to the ultimate outcome of these latter questions, but do urge to this Court that they *must* be reached since the claims recite a statutory machine. We do, however, note that several possibilities exist. Among them are the following:

1. This Court could find that the control system is an apparatus limitation and then consider patentability pursuant to 35 U.S.C. 102, 103.[6]

2. This Court might have found that the control system does not define an apparatus limitation with the particularity required by 35 U.S.C. 112.[7]

3. This Court could hold that the control system is not an apparatus limitation in the machine claim and, thus, while not improper, cannot be relied upon to impart patentability to the claim.[8]

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[6]*Graham v. John Deere Co.*, 383 U.S. 1 (1966).

[7]This was the substance of this Court's holding when it invalidated claim 8 in *O'Reilly v. Morse*, 15 How. 62, 112 (1853). See *Gottschalk v. Benson*, 409 U.S. 63, 68 (1972). However, since Petitioner excludes Section 112 considerations from this case (Pet. Br. 5, fn. 5), it would appear that this issue has been conceded.

[8]Just as a process limitation in a machine claim, while not improper, cannot impart patentability to the claim, *In re Stephens*, 345 F.2d 1020, 1023 (CCPA 1965); *In re Moeller*, 117 F.2d 565, 567 (1941).

The last of these is the main thrust of Petitioner's Brief which contends that *Benson* requires such a result. We shall demonstrate that it does not and that it would be inappropriate to fashion a *per se* rule of unpatentability in this regard. However, in order to present this discussion in an orderly manner, we will first treat Petitioner's question number 2, which is broader, and goes to the patentability of programs for existing general purpose computers, "however claimed".

Benson Does Not Mandate the Unpatentability of Programs for Existing Computers.

The scant attention which Petitioner devotes to his question number 2 simply assumes the erroneous conclusion that this Court held in *Benson* that any and all programs for existing general purpose computers are unpatentable. In so doing, Petitioner relies *solely* upon this Court's statement at 409 U.S. 73, "if *these* programs are to be patentable", Congress will have to provide additional statutory authority (Pet. Br. 36). This, of course, raises the question of what type of program this Court was referring to when it said "these programs". Petitioner assumes in its brief, without any supportive reasoning, that "these programs" means any and all programs for general purpose digital computers.[9] Such an assumption must fall in the face of this Court's statement in *Benson* at 409 U.S. 71:

> "It is said that the decision precludes a patent for any program servicing a computer. We do not so hold."

[9]In apparent contradiction to the recognition at page 2 of his Reply Brief of the "possibility of patentability" of programs.

Rather, when the *Benson* decision is read as a whole, the following is clear:

1. The patent application claims before the Court were *not* directed to a computer program, but rather to a "method of converting signals from a binary coded decimal form into binary" and a "data processing method for converting binary coded decimal number representations" (409 U.S. 73, 74).

2. The question which this Court was deciding in *Benson* was *not* the patentability of computer programs but rather "whether the method described and claimed is a 'process' within the meaning of the Patent Act" (409 U.S. 64).

3. The controlling concept underlying the decision in *Benson* is that an idea, *i.e.*, a principle in the abstract, cannot be patented (409 U.S. 67, 71).

4. In *Benson*, this Court concluded that the impermissible patenting of an abstract principle "would be the result if the formula for converting BCD numerals into pure binary numerals were patented in this case" (409 U.S. 71).

5. The process claims were considered to be so "abstract and sweeping" as to be capable of being "performed through any existing machinery or future-devised machinery or *without any apparatus*." (emphasis added, 409 U.S. 68).

6. This Court also noted, "the mathematical formula involved here has no substantial practical application except in connection with a digital computer" such that if a patent were granted. "the patent would wholly pre-empt the mathematical formula and in practical effect would be a patent on the algorithm itself" (409 U.S. 71. 72).

It was only then that this Court said "It may be that the patent laws should be extended to cover *these* programs" and that it was up to Congress to determine "if *these* programs are to be patentable". In so doing, this Court transferred its attention from what was being claimed and what it was holding unpatentable, viz., the "idea" or mathematical formula, to the *end use* of that idea or mathematical formula, viz., a computer program employing the formula. Thus, this Court's several references to "these programs" must, we believe, be taken to mean programs which are nothing more than computer translations of abstract mathematical formulas. This is, in effect, no different from holding that such an abstract mathematical formula cannot be patented by writing it on a piece of paper and then attempting to patent the paper together with the writing as an "article".

For example, this Court's holding in *Benson* could be expressed with regard to more familiar subject matter by observing that it dealt with a mathematical manipulation of precisely the same character as the conversion of fractions to decimals by dividing the numerator of the fraction by the denominator. This conversion of fractions to decimals is similarly an abstract princple and could not be rendered patentable by writing it down or by translating it into "computer language" in a computer program.

A Per Se Rule of Computer Program Unpatentability Would Be Inappropriate.

It would be a long, and unwarranted, step to conclude that because the abstract mathematical formulas considered by this Court in *Benson* were unpatentable and, presumably, would be unpatentable if claimed as

computer programs, that *any and all* computer programs, "however claimed", are unpatentable. To do so would be tantamount to saying, "there is nothing left to invent; all that can be invented has been done" and would thrust this Court into the role of attempting to command the tide of technological development relating to computer programs under circumstances not unlike those confronting King Canute. Rather, this is an occasion for exercise of the "responsible humility" which this Court has deemed appropriate in other cases.[10]

In this regard, as recognized by Petitioner (Pet. Br. 15, 16), programs for general purpose digital computers fall into at least two broad categories, viz., "system software" which performs only certain standard essential operations, *e.g., translating,* sorting, etc. and "applications software" which makes the computer perform desired operations, *i.e., control systems.* Petitioner further recognizes that the program claimed in combination with a computer in the present case is a *control* program (Pet. Br. 16). In contrast, as we have just pointed out, the method considered by this Court in *Benson* was a *translating* method and the discussion of computer programs in that case was limited to *translating* programs.

Furthermore, when a program functions to *control* a computer, the program is not unlike a cam arrangement in conventional machinery, *i.e.*, the computer responds to the control program in much the same way that the machine responds to the cam control. We believe that this Court would reject rather firmly the contention that *no* cam arrangement could *ever* be patentable, "however claimed". This would remain so even

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[10] *Beauhernais v. Illinois*, 343 U.S. 250, 262 (1952); *Rochin v. California*, 342 U.S. 165, 168 (1952).

if the cam arrangement was removable such that a first cam could be removed and a second substituted. Patent Office Class 74, subclass 567, is entitled "Cams" and contains many patents. Thus, the analogies to piano rolls, etc. (Pet. Br. 35) offered by Petitioner are hardly exhaustive and are somewhat misleading.

Still further, if this Court were ever to attempt to decide the broad question of whether computer programs for general purpose computers are patentable, however claimed, it would be hard to imagine a record less suitable for consideration of that issue than the present case.[11] Here, we have only the *ex parte* record created in the Patent Office, the factual content of which consists only of the patent application itself and the prior art. There has been no testimony, expert or otherwise, and it is certain that the patent application before this Court made no attempt to address itself to the broad question of patentability of computer programs. The numerous references (our count is 20) to extra-record technological and media sources in another amicus brief (CBEMA Br.) bear witness to the paucity of the factual record before this Court and it is worth noting that the statements made in those extra-record sources have not been subjected to cross-examination nor is there any way for this Court to determine whether those statements represent minority or even discredited views. The amicus Associations have had neither the time nor the technologically informed resources to be of assistance to the Court in this regard.

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[11]As in *United States v. Appalachian Electric Power Co.*, 311 U.S. 377, 423 (1940), it is "beyond the judicial function" to "predetermine the rights" of different parties in a matter "pregnant with the future controversy".

A Per Se Rule That a New Program Combined With an Existing Computer Cannot Be Patentable Is Equally Inappropriate.

If a *per se* rule that programs for existing computers are unpatentable is inappropriate, this is all the more so with regard to claims directed to programmed computers, *i.e.*, to the combination of such programs with existing computers. Petitioner conceded this at page 2 of his Reply Brief when he said:

> "To the contrary, we recognize the possibility of patentability if a program co-acts with an *ordinary computer* in a 'synergistic' way, if the program is carried out with newly-invented apparatus, or if a program produces a new use for an old machine sufficiently inventive to be patentable as a process." (emphasis added).

Thus, Petitioner's strenuous argument that the combination of a new program with an existing computer does not create a patentably new machine seems to be directed much more to the facts of the present case than to the general proposition and Petitioner suggests as much, *e.g.*, Pet. Br. 31, where the argument is reduced to "respondent's patent application, at least", and the reiteration of the "synergism" exception at Pet. Br. 29. The latter is nothing more than a statement that the claims must be unobvious within the meaning of 35 U.S.C. 103 as per the cases cited by Petitioner.

Indeed, it is the test for patentability under 35 U.S.C. 103 in the manner prescribed by this Court in *Graham* which should be applied in this case. However, Petitioner makes contentions which do not conform to the traditional approach of *Graham* and it is to this which we turn next.

Patentability Should Be Determined According to the Prescription of Graham.

In *Graham*, this Court held that the issue of unobviousness was to be decided by first determining the scope and content of the prior art, the level of skill in the art and the differences between the prior art and the claimed invention, and then determining whether such differences would have been obvious to one of ordinary skill in the art at the time the invention was made.

In a serious distortion of the prior holdings of this and other courts, Petitioner urges that the inventor's own conception should be used as prior art against him and even if the conception is unobvious, the implementation of that conception (or "idea") must *also* be unobvious in order for patentability to exist (Pet. Br. 22-24). Patentability should not be, and has not been, judged by such a 4-foot yardstick. The courts and Congress have been consistent in recognition of the fact that the hurdle of unobviousness must be cleared only once in order to obtain a patent. A few examples will suffice. Charles Goodyear's conception or "idea" that rubber could be effectively vulcanized by adding sulphur to a mass of rubber is generally recognized as a significant contribution to mankind and was patented. Yet, the *implementation* of that idea amounted to nothing more than adding sulphur to rubber and the implementation could hardly have taken any other form. Similarly, the conception or "idea" of Wallace H. Carrothers that certain chemicals could be reacted to produce a useful plastic material (nylon) was implemented by placing those chemicals in a suitable container, *e.g.*, a test tube or beaker, and allowing them to react. Given the idea, could that implementation have been held to be unobvious? The same would be true of most chemical reactions. Yet, a patent was granted to Carrothers and hundreds of thousands of other chemical reactions have been patented. Still further, 35 U.S.C. 100(b) expressly provides that a new use of a known machine, process, or composition is patentable as a process. Given the conception or "idea" of making such a new use of a known machine, process or composition, Section 100(b) would be rendered meaningless if there was an additional *requirement* that the implementation of the idea also be unobvious. In this regard, it is also to be noted that Section 100(a) provides that "invention", as used in Title 35 of the United States Code, means an "*invention or discovery*" (emphasis added). Stated differently, if applicant's "idea" is, in effect, used as prior art against him, the result is a hindsight approach to the issue of patentability which this Court has many times condemned, most recently in *United States v. Adams*, 383 U.S. 39, 50 (1966) where, in the course of determining that a patent directed to a battery was valid, this Court ruled that it "begs the question" to state that the battery components claimed in combination were known to have been used individually as such components in other batteries. Rather, this Court pointed out that the issue was whether "bringing them together" was patentable. However, given the idea of bringing them together, the implementation of that idea could not be said to be unobvious since it involved nothing more than putting the components together in a conventional manner to construct a battery. To the extent that there is language in *Funk Bros. Seed Co. v. Kalo Inoculant Co.*, 333 U.S. 127 (1948) which can be read to express a different standard of patenta-

bility (as contended at Pet. Br. 23, 24), that language must be kept in the context of *Funk* and not interpreted in a manner inconsistent with *Graham*, *Adams* and the 1952 Patent Act.[12]

Finally, we note briefly some rather serious flaws in law and logic in other contentions pressed by Petitioner on the issue of patentability. They are:

1. That a grant of patent claims directed to a computer in combination with a program would "impermissibly" (Pet. Br. 36) withdraw from the public its right of free access to the computer once patents, if any, covering the computer had expired. This is flagrantly untrue. Such withdrawal as might result would be no different from the "withdrawal" of the wheel which occurred when a patent was granted on the automobile and, again, on the airplane, etc. It is a self-evident fact of technological development that most inventions are made by making new combinations of old elements, *e.g.*, the very patents on computers to which Petitioner does not seem to object would "withdraw" from use transistors, capacitors, resistors, switches, etc., which themselves may or may not be the subject of expired or unexpired patents.

2. That grant of a patent on the combination of a computer and a program would "conflict" with patents already granted to the inventors of the computers (Pet. Br. 36, footnote 37). This is a misstatement of fact. It frequently occurs that a first patented device, *e.g.*, a switch, is used in a second patented device, *e.g.*, a computer. If this

[12]See *Blonder-Tongue Laboratories v. University of Illinois Foundation*, 402 U.S. 313, 333 (1971), requiring use of the *Graham* standards.

occurs, the computer inventor and manufacturer who uses the patented switch must pay license royalties or infringement damages. Certainly, grant of the second patent, *e.g.*, on the computer, does not deprive the owner of the patent on the switch "of all the uses to which it can be put".

3. That granting a patent on the combination of a computer and a program would be a "simple" way of "circumventing" the principle that an idea is not patentable by using the "facile drafting device" (Pet. Br. 29) of claiming the invention in the form of a machine rather than as an idea. This is somewhat startling. The entire thrust of *Benson* and the many precedents which it cites are that ideas must be claimed in tangible form to be patentable. To do so is no more "facile circumvention" than the claiming of a new use of an existing composition as a process (*e.g.*, a method of treating a disease by administering the compound) rather than the composition (*e.g.*, a known chemical compound which would be unpatentable), as prescribed by 35 U.S.C. 100(b).

4. That "hardware" may be patentable but "software" in combination with a computer is not (Pet. Br. 32). The words "software" and "hardware" must be used with caution. Much "software" would be considered by the ordinary observer to be quite "hard", *e.g.*, the tapes, drums, discs, etc. described by this Court in *Benson* at 409 U.S. 65. Furthermore, the fact that something is "soft", *e.g.*, made from paper, does not render it unpatentable. For example, Patent Office Class 283 is devoted to "Printed Matter" and has existed in that form since 1918, during which time thou-

sands of patents have been granted for paper goods such as the labels and tags of subclass 18 and the checks of subclass 58 of Class 283. Thus, to determine patentability based upon the hardness or the softness of the subject matter is to use the wrong criterion. Rather, the issue must be decided on the basis of what the subject matter is and what it does.

5. That there is something inherently repugnant to the law in a "legal fiction" (Pet. Br. 13). If it were a legal fiction that the combination of a computer and a program were a new machine rather than actual fact (a determination which we believe must be made on a case-by-case basis), it would remain to be decided whether the legal fiction should be given effect. So-called legal fictions are deeply woven into our jurisprudence, *e.g.*, the proposition that a corporation is a person, and they have been employed to the great benefit of society, not to its detriment.

6. That a "program" and a "formula" are identical (Pet. Br. 17, footnote 16) and that all programs are for the purpose of "translation" (Pet. Br. 29). We have earlier noted that refutation of this notion found in Petitioner's Brief itself, at pages 15 and 16, where it is recognized that it is only one type of program that performs a translating function and that another type performs a control function.

Conclusion.

The amicus Associations urge this Court to:

1. Affirm the holdings of the Court below that the claims recite a statutory machine within the meaning of 35 U.S.C. 101;

2. Decline to fashion a *per se* rule of unpatentability for computer programs or programmed computers.

While the amicus Associations express no view on the ultimate issue of the patentability of the claims presented in this case, they do urge that this issue be decided according to traditional principles of patent law. Petitioner has clouded this issue with several erroneous contentions which we have pointed out above.

Respectfully submitted,

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